MARINE ENGINEERING—INDEX TO VOL. I.

Which contains the issues from April to December (inclusive) 1897.

NOTE.—The figures following the name of the month refer to page numbers. Illustrated articles are marked with an asterisk (*) following the title.

A.

Accident to torpedo destroyer,* June, 33.
Acetylene gas apparatus,* November, 28.
ADMIRALTY LAW.
Claims on account of collision, May, 37.
Maritime lien disallowed, April, 32.
Naval sea duty defined, April, 32.
Personal injury suit, April, 32.
Responsibility for collision, May, 37.
Salvage as distinguished from towage, April, 33.
Salvage claim disallowed, April, 32.
Stowaway seeks damages, May, 37.
Tug responsible for safety of tow, April, 32.
Aluminum for ship construction, Oct., 18.
American engineering methods, British view of, May, 35.

B.

BOILERS.
Dimensions for steam tug, July, 34.
Ohio river steamers,* Nov., 16.
Scotch for U. S. S. Nashville,* Sept., 10.
Scotch for U. S. S. Chicago,* May, 12.
Steam Friend patent,* June, 39.
Steam See patent,* June, 39.
U. S. S. Chicago,* May, 12.
U. S. S. Nashville,* Sept., 10.
Water-Tube, Durr patent,* July, 24.
Water-Tube in mercantile marine, *A. E. Seaton*, July, 13, Aug., 16.
Water-Tube Normand et Sigaudy, instalment of 23,000 H. P., Sept., 38.
Water-Tube in war ships, May, 14.
Yarrow for S. S. Nashville,* Sept., 10.
British seaman, *Lord Brassey* on the, May, 34.
British methods of construction, *Walter Miller*, July, 18.
Business notes, April, 34; May, 38; June, 41; July, 39; Aug., 42; Sept., 41; Oct., 36; Nov., 40; Dec., 41.

C.

Canadian trans-Atlantic service, May, 34.
Canoe launch for three passengers,* Nov., 24.
Cargo, electric cranes for handling,* Aug., 24.
Catalogues, April, 33; May, 38; June, 40; July, 38; Aug., 39; Sept., 40; Oct., 35; Nov., 40; Dec., 41.
Cavitation, description of this phenomena, *Sydney W. Barnaby*, Oct., 16.
City of Dublin Steam Packet Co.'s vessels,* June, 9.
Classification of war vessels of the world, *Bernhard A. Sinn*, May, 16.
Closet for war vessels and yachts,* Nov., 31.
Coal, American ousting British, April, 29.
Coal, car dumping machine,* July, 35.
Coal, method of loading at lake docks,* Aug., 35.
Composite light-vessels,* Nov., 8.
Composite revenue cutter, McCulloch,* June, 1.
Composite vessels, fitting of sea valves to,* July, 20.
CONSTRUCTION.
British methods of, *Walter Miller*, July, 18.
Difficulties of high speed engine, July, 27.
Method of S. S. Père Marquette,* May, 6.
Method of U. S. S. Nashville,* Sept., 1.
Method of Rev. Cutter McCulloch,* June, 1.
Nickel, steel, and aluminum, materials for, Oct., 18.
Of battleships at Newport News,* Sept., 17.
Of canoe launch,* Nov., 24.
Of Ohio river steamer,* Oct., 5.
Use of decimal system in, Aug., 29.
Use of steel in, Sept., 21.
CONSTRUCTION NOTES.
Bath Iron Works, April, 30.
Cleveland Ship Building Co., April, 30.
Columbia Engineering Works, McNeil Bros., May, 31.
Davidson, James, July, 37.
Gas Engine and Power Co., and Charles L. Seabury & Co., Con., May, 31.
Jackson & Sharpe Co., May, 31.
Moran Bros.' Co., April, 30.
Neafie & Levy Ship and Engine Building Co., April, 30; May, 31.
New York Yacht, Launch and Engine Co., May, 31.
Wheeler, F. W., & Co., April, 30.
Wolff & Zwicker, April, 30.
Cornell University, experimental tank at,* Nov., 7.
CORRESPONDENCE.
Air-Pumps of U. S. R. C. McCulloch, July, 28.
Analysis of cylinder deposits, *Thomas B. Stillman*, May, 29.
Condenser leaks, April, 24.
Crank shaft breakages, June, 31.
Cylinder lubrication, July, 28.
Deposits in steam cylinders, April, 24; May, 28.
Details of "Turbinia," Oct., 28.
Device for boiler construction,* Aug., 32.
Drilling table for ship work,* Sept., 34.
Excess feed water, April, 24; June, 30; Aug., 33.
Explosion on river steamer Sultana,* June, 31.
Failure of condenser tubes, April, 24.
Method of securing oil cups, May, 28.
Oil in feed water, April, 24; June, 30.
Performance of across-channel steamers, Sept., 33.
Power required for propulsion, Sept., 34; Oct., 27.
Query regarding B. T. U., Oct., 27.
Question of boiler economy, Aug., 32; Sept., 33.
Sheet lead packing, June, 30.
Troublesome feed pumps,* May, 28; June, 30; July, 29.
Walschaert valve diagram wanted,* Nov., 34.
Water gauge glasses, July, 28.
Water-tube boilers, April, 24; May, 28.
Corrosion in steam vessels remedied, July, 37.
Cramp, Charles H., on the merchant marine, May, 27.
Crank shaft breakage, discussion on, Oct., 26.
Crank shafts in mercantile marine,* *G. W. Manuel*, Sept., 22.

D.

Decimal system in engineering practice, Aug., 29.
Design, application of model experiments to, Aug., 20.
Design, aid of the experimental tank in,* Nov., 4.
Directory, Beeson's marine, June, 40.
Dock wheelbarrow for coaling,* Aug., 23.
Dry Dock No. 3, Brooklyn Navy Yard,* April, 18.
Dry Docks, U. S. dimensions of,* April, 18.

E.

EDITORIAL.
Breakdown on S. S. La Grande Duchesse, April, 22.
Canadian mail steamship service, Aug., 28.
Collision between S. Y. Hermione and S. S. Saratoga, Sept., 30; Oct., 25.
Comment on letter of Charles H. Cramp, May, 26.
Comment on statement of London Engineer, Aug., 28.
Comparison of American and foreign shipbuilding, Sept., 30.
Experimental tank at Cornell University, Nov., 32.
Fire on S. S. Leona, June, 28.
Foreign built yachts for Americans, April, 22.
Foreign ships for American trade, Oct., 24.
International meeting Institution of Naval Architects, June, 28.
Laws applying to motor boats, Nov., 33.
Loss of Russian ironclad Gangout, Aug., 29.
Meeting of Society of Naval Architects and Marine Engineers, Nov., 33.
Mishaps to war ships, April, 22.

Digitized by Google

Navy line and staff differences, Dec., 25.
Navy Yard regulations, April, 23.
Need of naval docks, Oct., 25.
Nickel steel boilers, May, 26.
Nomenclature of yachts, Aug., 29.
Salutatory, April, 22.
S. N. A. & M. E., meeting of, Dec., 24.
Steam yacht Marietta, April, 22; June, 28.
U. S. Navy estimates, Nov., 32.
U. S. torpedo boat destroyers, July, 26.

EDUCATIONAL.
Electricity on board ship,* *Wm. Baxter, Jr.*, July, 31; Aug., 33; Sept., 35; Oct., 28; Dec., 38.
Indicator applied to marine engine,* *Henry L. Ebsen*, April, 26; May, 32; June, 34.
Sketching for marine engineers,* *Prof. C. W. MacCord*, July, 30; Nov., 36.

Efficiencies of marine engines, Oct., 20.

ELECTRICITY.
Cargo cranes on S. S. Bremen,* Aug., 24.
Direct connected lighting plants,* July, 23.
Installation on S. S. La Grande Duchesse,* April, 12.
Lighting plant on steamer Queen City, Nov., 20.
Lighting sets for yachts,* Sept., 28.
Marine lantern,* Aug., 26.
On board ship, principles and practice,* *Wm. Baxter, Jr.*, July, 31; Aug., 33; Sept., 35; Oct., 28; Dec., 38.
Rheostat for marine plants,* Sept., 28.
U. S. Light-Vessels, 68 and 69, Nov., 8.

ENGINES.
Efficiencies of, *Bernhard A. Sinn*, Oct., 20.
For steam pinnace, July, 21.
Forbes high speed,* July, 22; Oct., 23.
Four cylinder, Paine,* Aug., 23.
Gasoline marine,* July, 23.
Herreshoff patent,* April, 31.
High speed, difficulties of construction, July, 27.
Lockwood high speed,* June, 25.
Marine gas,* Aug., 23.
Mianus marine gas,* Aug., 27.
Ohio river steamer,* Nov., 16; Dec., 19.
Revenue cutter McCulloch,* June, 2.
Rotary and reciprocating,* *Hon. Charles Parsons*, July, 11.
Safety piston for,* Sept., 27.
Shepherd automatic,* April, 20.
S. S. Helene,* Nov., 2.
S. S. Kaiser Wilhelm der Grosse,* Oct., 2.
S. S. Pennsylvania,* April, 6.
S. S. Princess Anne,* Aug., 3.
S. Y. Mayflower, Aug., 20.
Triple expansion turbine,* Dec., 13.
Using 500 lbs. pressure, Nov., 21.
U. S. Light-Vessels, Nos. 68 and 69,* Nov., 14.
U. S. S. Brooklyn,* July, 2.
U. S. S. Chicago,* horizontal, April, 1.
U. S. S. Iowa, May, 3.
U. S. S. Nashville,* Sept., 3.
Willard stern wheel,* Dec., 22.

Engineers, regulations of Revenue Cutter Service, Aug., 15.

Estimates of power on ocean voyages, June, 37.

EXCHANGES.
Alterations to S. S. Virginia, Oct., 33.
American coal ousting British, April, 29.
Canadian trans-Atlantic service, May, 34.
Car float for N. Y. P. & N. R. R.,* Oct., 32.
Corrosion in steam vessels remedied, July, 37.
Floating dock at Hamburg, Aug., 38.
Floating pneumatic grain elevator, April, 29.
Long coal car dumping machine,* July, 35.
Lord Brassey on the British seaman, May, 34.
Marine engineering 50 years ago, June, 36.
Methods of loading coal,* Aug., 35.
New mail steamship record, April, 28.
Nickel steel in ships, July, 36.
On trade secrets, May, 35.
Power estimates on ocean voyages, June, 37.
Protection for large cruisers, May, 35.
Rudder frames for U. S. battleships,* June, 37.
Steam, by *Prof. De Volson Wood*, Aug., 36.
Steamboats on western American rivers,* Oct., 31.
Stern frame for S. S. Oceanic, July, 37.
Traffic in New York harbor, April, 28.
Vessel for winter lake service,* June, 38.

Expansion balanced joint,* Sept., 27.

Experimental tank, uses of,* *Prof. W. F. Durand*, Nov., 4.

F.

Ferryboat Chebucto, Nov., 26.
Ferryboat Columbia, mishap to,* Nov., 35.
Ferryboat for freight cars,* Oct., 32.
Ferryboat, origin and development of,* *E. A. Stevens*, April, 14; May, 18; July, 14.
Ferryboats used in Denmark,* *Capt. I. C. Tuxen*, Sept., 14.
Ferry steamer, Père Marquette,* May, 6.
Floating dock at Hamburg, Aug., 38.
Floating dock for Havana, Oct., 28.
Floating dock at Philippine Islands, April, 11.
Forbes high speed engine,* July, 22; Oct., 23.

G.

Governor for marine engine,* Wilson patent, May, 36.
Grate, Reagan chopping,* Nov., 31.
Gunboat mistaken for yacht,* June, 23.
Gunboat Nashville,* Sept., 1.

H.

Hawaiian Islands steamship Helene,* Nov., 1.
Holland submarine boat,* June, 20.

I.

Ice breaking steamers, Danish,* Sept., 14.

IMPROVED APPARATUS.
Acetylene gas equipment,* Nov., 28.
Automatic positive feed lubricator,* Oct., 22.
Balanced high pressure expansion joint,* Sept., 27.
Ball bearings for steam vessels,* June, 24.
Ball valve automatic injector,* Oct., 22.
Battle Creek steam pump,* July, 22.
Bundy steam trap,* April, 21.
Campbell safety piston,* Sept., 27.
Centrifugal pump and engine,* May, 23.
Combined surface condenser and pumps,* Nov., 28.
Cross adjustable water tight door,* Nov., 30.
Dead bar chopping grate,* Nov., 31.
Direct connected lighting plants,* July, 23.
Durr water-tube boiler,* July, 24.
Eaves helical draft,* Dec., 22.
Electric cargo cranes,* Aug., 24.
Enamel Field rheostat,* Sept., 28.
Forbes high speed engine,* July, 22.
Four-cylinder Paine engines,* Aug., 23.
Gasoline marine engine,* July, 23.
Geipel steam trap,* May, 21.
General Electric sets,* May, 23.
Hydraulic coupling bolt forcer,* May, 22.
Kling marine boiler,* June, 26.
Lockwood high speed engines,* June, 25.
Lunkenheimer water gauge,* Aug., 27.
Marine pump water closet,* Nov., 31.
Mianus gas engine,* Aug., 27.
Penberthy automatic injector,* April, 19.
Porter electric lantern,* Aug., 26.
Roller thrust bearing,* June, 24.
Seabury water-tube boiler,* May, 22.
Sectional piston rod packing,* June, 24.
Shepherd automatic engine,* April, 20.
Small lighting sets,* Sept., 28.
Steamship radiators,* April, 20.
Viaduct Brass Works,* reducing valve, April, 19.
Water ballast pump,* Sept., 26.
Willard stern wheel engine,*Dec., 22.
Wing marine gas engine,* Aug., 23.
Worthington pressure pumps,* June, 26.

Injector, Lee ball valve,* Oct., 22.

Institution of Naval Architects, international meeting of, Sept., 32.

International meeting of Naval Architects, Sept., 32.

Investigation into causes of tail shaft breakages, Nov., 26.

Digitized by Google

K.

Klondike, loading vessels for,* Dec., 16.
Knapp roller boat,* Dec., 12.

L.

Lake steamers, increasing size of, April, 16.
Largest paddle steamship afloat,* June, 10.
Launch of lake steamship,* Oct., 12.
Life boat, Bethke patent,* Sept., 39.
Light vessels for U. S. Government,* Nov., 8.
Liquid fuel, experiments in U. S. Navy,* *J. S. Zerbe*, June, 18; Aug., 8.
Liquid lubricants, notes on, *Henry E. Cutts, A. M.*, April, 4.
Loading of vessels in "Klondike" trade,* Dec., 16.
Locks of St. Mary's Falls canal,* Oct., 19.
Lubricator, automatic positive feed,* Oct., 22.

M.

Machinery for operating canal locks,* Oct., 19.
Marine engineering 50 years ago, June, 36.
Melville, George W., Engineer-in-Chief, U. S. N., excerpts from speech on Naval Engineers, April, 23.
Merchants' and Miners' S. S. Juniata,* Dec., 1.
Metallic packing, Law patent,* Nov., 39.
Mishaps.
- Broken steam pipe, S. S. La Grande Duchesse,* April, 25.
- Bark steered with jury gear,* May, 30.
- Broken thrust shaft replaced,* June, 33.
- Collapse of flue,* July, 29.
- Collision between Mississippi and Thingvalla, July, 34.
- Collision between Newport News and Columbia,* Nov., 35.
- Failure of stop valves, July, 30.
- Failure of torpedo boat crank shaft,* Oct., 27.
- Fire on S. S. Leona,* June, 32.
- Repairs to S. S. Horrox,* May, 30.
- Replacing rudder, S. S. Borderer,* April, 25.
- Shaft of S. S. Spree fractured,* Sept., 37.
- Smashup of beam engine,* Aug., 31.
- Smashup of engines of destroyer Star, July, 27.
- Steam pipe failure, July, 29.
- Steamer Ulster goes ashore,* Dec., 37.
- Stern frame and rudder, S. S. Barbara,* Aug., 31.

Model experiments, application of, Aug., 20.
Model experiments, tank for,* Nov., 4.
Motor boats at Sportsmen's Exposition, April, 27.
Motor boat styled "canoe launch,"* Nov., 24.
Motor boat Helene,* May 25.

N.

Naval review at Spithead, Queen Victoria Jubilee,* *Chief Engineer, John D. Ford, U. S. N.*, Aug., 4.
New York harbor, traffic in, April, 28.
News and Notes.
- Address of Assistant Secretary of the Navy Theodore Roosevelt, Sept., 11.
- Addition to Italian fleet, Nov., 39.
- Amer. Soc. M. E., meeting of, Dec., 2.
- Boiler for steam tug, July, 34.
- British comment on U. S. S. Brooklyn, Aug., 11.
- British naval building program, May, 3.
- British naval expenditures, July, 30.
- British Navy estimates, April, 5.
- British smelting interests, May, 24.
- Canadian fast mail service, July, 34.
- Channel tunnel, May, 29.
- Clyde liner ashore, April, 27.
- Collision between Mississippi and Thingvalla, July, 34.
- Commissioner of Patents, report, April, 29.
- Contracts for torpedo boat destroyers, Aug., 33.
- Cruise of U. S. S. Detroit, June, 39.
- Cunard coal contracts, July, 37.
- Cunard Line, financial statement of, May, 35.
- Deepening New York harbor, April, 9.
- Documented U. S. merchant marine, Oct., 34.
- Double screw ferryboat Chebucto, Nov., 26.
- During the Month, Sept., 38.
- Financial report, Wm. Cramp & Sons, Aug., 10.
- Fireproofed wood on U. S. ships, Aug., 35.
- Floating dock for Havana, Oct., 28.
- Floating dock for Philippine Islands, April, 11.
- Galveston steamship service, Aug., 10.
- Government speed trials, Aug., 4.
- Hamburg-American Line, May, 29.
- Institution of Naval Architects' meeting, May, 24.
- International meeting of I. N. A., June, 23.
- Japanese shipbuilding, June, 4.
- Japanese steamship line, April, 30.
- Manchester ship canal, returns, April, 15.
- Mare Island jib crane, May, 15.
- Mosher launch, Ellide, July, 17.
- New Turbinia ordered, Oct., 34.
- On stowaways, Oct., 26.
- Report American Seaman's Friend Society, Nov., 36.
- Sale of City of Chester, Oct., 34.
- Sand blast tests, April, 16.
- Society N. A. & M. E. meeting, June, 14.
- Speed of Turbinia, Oct., 26.
- Steamer for Maine S. S. Co., Oct., 34.
- S. S. Aorangi, June, 4.
- S. S. Kaiser Friedrich, Nov., 26.
- S. S. Kaiser Wilhelm der Grosse, June, 35.
- Steam yacht for Thomas McKean, Oct., 34.
- Steam yacht Varuna, June, 33.
- Strike at Yarrow's shops, Nov., 36.
- Submarine boat Argonaut, Sept., 34.
- Tidal dock at Glasgow, Oct., 15.
- Trade at Liverpool, Oct., 26.
- U. S. exports, April, 27.
- War ships building, June, 39.
- White Star liner, Oceanic, April, 15.
- Wrecking work on S. S. Ailsa, June, 31.

Nickel steel boiler for U. S. S. Chicago,* May, 12.
Nickel steel for ship construction, *J. H. Biles*, Oct., 18.
Nickel steel in ships, foreign comment on use of, July, 36.
Nickel steel shaft for river steamer,* Nov., 18.

O.

Obituary, Arthur Lozier, Sept., 39.
Obituary, J. K. Kilbourn, Sept., 39.
Ocean voyages, power estimates on, June, 27.
Ohio river steamers, history of,* Oct., 31.
Ohio river steamer Queen City, description of,* Oct., 5.
Yachting exhibition in London, June, 39.
Oil distribution for calming waves, Knowles patent,* April, 31.
Old Dominion liner Princess Anne,* Aug., 1.

P.

Patents.
- Belleville steam generator,* Nov., 39.
- Bethke life boat,* Sept., 39.
- Device for closing bulkhead doors,* April, 31.
- Device for propelling ships,* Aug., 41.
- Herreshoff engine,* April, 31.
- Hopkinson & Lowis water gauge,* Oct., 34.
- Kirby steering gear,* July, 38.
- Lake submarine boat,* June, 38.
- Law metallic packing,* Nov., 39.
- Marine engine governor,* May, 36.
- McCurdy speed indicator,* Aug., 41.
- Oil distributor for calming waves,* April, 31.
- Sager tide motor,* July, 38.
- Screw propelling mechanism,* May, 36.
- Smith's speed recorder,* Sept., 39.
- Steam boiler, Horace See,* June, 39.
- Steam boiler, John E. Friend,* June, 39.
- Thomas ship cleaning apparatus,* Oct., 35.
- Vier rudder,* Sept., 39.

Piston, Campbell's patent safety,* Sept., 27.
Piston packing rings, dimensions for,* May, 36.
Pittsburg and Cincinnati packet Queen City,* *Bert L. Baldwin*, Oct., 5; Nov., 16; Dec., 19.
Pneumatic grain elevator, Garryowen, April, 29.
Propeller shaft breakage, discussion on, Oct., 26.
Propellers, Jasper Hayes' patent,* May, 36.
Propellers screw, influence of surface on performance,* *Prof. W. F. Durand*, Dec., 2.
Propelling ships, Pinchard device for,* Aug., 41.
Protection for large cruisers, May, 35.

Digitized by Google

PUBLICATIONS, NEW.
Beeson's marine directory, June, 40.
Blue book of American shipping, Aug., 39.
Cassier's magazine for August, Sept., 40.
Fuel and refractory materials, *A. H. Sexton, F.I.C.*, May, 38.
Investigation into action of screw propeller, Aug., 39.
Mechanical engineering of power plants, *F. R. Hutton, M.E.*, April, 33.
Pacific coast trade review, Aug., 39.
Pamphlet on American and other machinery abroad, Nov., 39.
Pamphlet on naval policy, Oct., 34.
Pamphlet on Yukon region, Oct., 34.
Power Catechism, Dec., 41.
Report of Life Saving Service, Aug., 39.
Theoretical and practical graphics, Oct., 34.
Trigonometry, by Richard C. Buck, Dec., 41.
Pumps for steam yachts,* July, 22.

Q.

Quadruple expansion at 500 lbs. pressure,* *Dr. R. H. Thurston*, Nov., 21.

R.

Record of mail steamship Ulster, April, 28.
Revenue cutter, McCulloch,* June, 1.
Revenue Cutter Service, regulations for admission of engineers, Aug., 15.
Rheostat for marine plants,* Sept., 28.
River steamer Sultana, explosion on,* June, 31.
Roller boat,* Knapp, Dec., 12.
Rudder frames for U. S. battleships,* June, 37.
Rudder, Viert patent,* Sept., 39.
Rudders, fitted to Chicago tugs,* Aug., 10.

S.

Salvage awards made, Sept., 37.
Scotch boilers for U. S. S. Chicago,* May, 12.
Scotch boilers for U. S. S. Nashville,* Sept., 10.
Screw propellers, cavities formed by, Oct., 16.
Screw propellers, investigations of,* *Prof. W. F. Durand*, Dec., 2.
Sea valves for composite vessels,* July, 20.
Search lights, Rushmore type,* July, 24.
Shafts used in mercantile marine,* Sept., 22.
Ship cleaning device, Thomas patent,* Oct., 35.
Shipyards, notes on British, *Walter Miller*, July, 18.
Sketching for marine engineers,* *Prof. C. W. MacCord*, July, 30; Nov., 36.
Society of Naval Architects and Marine Engineers, meeting of, Nov., 33; Dec., 26.
"Soo" Canal, traffic in,* Aug., 22.
Speed indicator, McCurdy patent,* Aug., 41.
Speed recorder, Smith patent,* Sept., 39.
Speed trials, methods used for, Aug., 4.
Stability, hints on elementary, *Capt. A. S. Thomson, Lieut. R. N. R.*, May, 3.
Stability, statical method of ascertaining,* *A. G. Ramage*, July, 9.
STEAM.
A dissertation on, *Prof. De V. Wood*, Aug., 36.
High pressure on sea going ships,* *Dr. R. H. Thurston*, April, 10; May, 9.
Influence of moist in the turbine,* *D. S. Jacobus*, June, 21.
Steam launch Ellide, July, 17.
Steam pinnace for British Navy,* July, 21.
Steam pressure of 500 lbs.,* Nov., 21.
Steamers for winter lake service,* June, 38.
STEAMSHIPS.
Circassia, fractured thrust shaft,* June, 33.
Connaught, June, 10.
Empress Queen,* June, 10.
Helene,* Nov., 1.
Juniata,* Dec., 1.
Kaiser Friedrich, Nov., 26.
Kaiser Wilhelm der Grosse, June, 35; *Oct., 1.
La Grande Duchesse,* April, 12; April, 25; Sept., 37.
Leona, fire on,* June, 32.
Monarch, dimensions of, Sept., 38.
Oceanic, stern frame for, July, 38.
Pennsylvania,* April, 6.
Pere Marquette,* May, 6.
Princess Anne,* Aug., 1.
Priscilla,* June, 12.
Starrucca,* construction and launch of, Oct., 12.
Ulster goes ashore,* Dec., 37.
Victoria, description of, Sept., 37.
Steamship vibrations, investigation of,* *Prof. W. F. Durand*, June, 14; July, 4; Aug., 11.
Steamship vibrations, methods of securing record of,* *Prof. W. F. Durand*, Sept., 12.
STEAM YACHTS.
Ellide, July, 17.
Marietta,* April, 17.
Mayflower,* April, 17; Aug., 19.
Varuna, June, 33.
Steel as a material for construction, *C. A. McAllister, R. C. S.*, Sept., 21.
Steering gear, Kirby patent,* July, 38.
Stern wheel steamer, Queen City,* description of, Oct., 5; Nov., 16; Dec., 19.
Storage battery for yachts,* Sept., 28.
Submarine boat, Argonaut,* Sept., 34.
Submarine boat, Holland,* June, 20.
Submarine boat, Lake patent,* June, 38.
Submarine boat, Plunger,* Sept., 20.
Suez Canal, traffic in,* Aug., 22.
Surface condenser and pumps combined,* Nov., 28.

T.

Tail shaft breakages, investigation of, Nov., 26.
Tide motor, Sager patent,* July, 38.
Torpedo boat, equipment for liquid fuel,* Aug., 8.
Torpedo boat, failure of crank shaft,* Oct., 27.
Torpedo boat Turbinia,* June, 6; *July, 11; Oct., 28.
Towing, Californian method of,* May, 5.
Trial trip data, R. C. McCulloch, June, 4.
Trial trip data, U. S. S. Nashville, Sept., 11.
Tugs at Chicago, rudders for,* Aug., 10.
Turbine for steam vessels,* *Hon. Charles Parsons*, June, 6; Dec., 13.
Turbinia, machinery of,* *Hon. Charles Parsons*, July, 11; Dec., 13.

V.

Vibrations, method of securing a record of,* *Prof. W. F. Durand*, July, 4; Aug., 11; Sept., 12.

W.

WARSHIPS.
At Spithead Jubilee Review,* Aug., 4.
Rudder frames for,* June, 37.
Steam pinnace for,* July, 21.
U. S. S. Annapolis,* June, 23.
U. S. S. Brooklyn,* July, 1.
U. S. S. Chicago,* engines of, April, 1.
U. S. S. Detroit, cruise of, June, 39.
U. S. S. Iowa,* May, 1.
U. S. S. Nashville,* Sept., 1.
U. S. S. Plunger,* Sept., 20.
U. S. torpedo boat Rodgers, crank shaft breakage,* Oct., 27.
Work on Kearsarge, Kentucky and Illinois,* Sept., 17.
Water ballast, Deane pump for,* Sept., 26.
Water ballast, remarks on, *Capt. A. S. Thomson, Lieut. R. N. R.*, May, 3.
Water gauge, Hopkinson and Lowis patent,* Oct., 34.
Water gauge, Lunkenheimer,* Aug., 27.
Water tight door, Cross adjustable,* Nov., 30.
Water tight doors, apparatus for closing,* April, 31.
WATER-TUBE BOILER.
Belleville patent,* Nov., 39.
Discussion on, June, 29.
Durr patent,* July 24.
In merchant marine, *A. E. Seaton*, July, 13; Aug., 16.
In warships, *Rear-Admiral C. C. P. FitzGerald, R. N.*, May, 14.
Mishap,* June, 33.
Wilsons and Furness-Leyland line, ships for, Sept., 37.
Winter lake service, vessels for,* June, 38.

Y.

Yacht propelled by gasoline motor,* May, 25; Aug., 23.
Yarrow boilers,* Sept., 10.

Digitized by Google